

REMARKS/ARGUMENTS

In the Office Action issued November 25, 2008, claims 1, 4, 11-14, and 17-20 were rejected under 35 U.S.C. § 102(e) as being anticipated by Ukrainczyk et al., U.S. Patent App. Pub. No. 2002/0022956 (“Ukrainczyk”). Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ukrainczyk in view of Tokuda et al., U.S. Patent App. Pub. No. 2003/0050921 (“Tokuda”). Claims 3 and 5-10 rejected under 35 U.S.C. § 103(a) as being unpatentable over Ukrainczyk in view of Mohan et al., U.S. Patent No. 7,194,483 (“Mohan”). Claims 1-14, 17, and 20 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 1-14 and 17-20 were objected to.

Claims 1-14 and 17-20, and 27-28 are now pending in this application. Claim 1 has been amended to clearly recite a concrete and tangible result, which is displaying the processed textual information via a user output interface. Support for this amendment may be found in the specification, for example, at page 15, lines 31-33. Claims 17, 18, and 20 have been amended to clearly recite that they are computer-implemented and so include the necessary physical objects to constitute a machine or manufacture, as required by statute. Support for these amendments may be found, for example, in Fig. 1 and the associated text in the specification. New claims 27 and 28 include subject matter similar to claim 1 and, similarly to claim 1, are drawn to generating textual information expressing term-to-term relationships, and displaying this information to a user. Claim 27 is directed to a computer system and claim 28 is directed a computer program product. No new matter has been added.

Claims 17-19 have been amended as suggested by the Examiner in order to overcome the objections and claim 20 has been similarly amended. Claims 1-14, as amended in the Preliminary Amendment filed July 15, 2004, do not include the words “characterized by” and claims 17-20 as amended in the Preliminary Amendment filed July 15, 2004, do not include the words “characterized in that.” Claims 17-20 as amended in the Preliminary Amendment filed July 15, 2004, do not include numeric numbers or the term “(Q).” All objections to the claims are believed to be overcome.

The present invention is directed to processing digitized textual information, the information being organized in terms, documents and document corpora, where each document contains at least one term and each document corpus contains at least one document, generating textual information expressing term-to-term relationships, and displaying this information to a user. The Applicant believes that it would be useful for the Examiner's understanding of the invention to refer to the Assignee's web page (www.silobreaker.com), or more precisely:

http://www.silobreaker.com/FlashNetwork.aspx?DrillDownItems=11_333705 (FLASH PLAYER VERSION), or

http://www.silobreaker.com/Network.aspx?DrillDownItems=11_333705 (NON-FLASH PLAYER VERSION).

The same information is also available via the "In Focus" box of the 360-page, i.e. http://www.silobreaker.com/View360.aspx?Item=11_333705.

The Applicant respectfully submits that claims 1-14 are not anticipated by Ukrainczyk. Ukrainczyk discloses a method for classifying documents into a plurality of categories. To this aim, category vectors are produced. A feature vector for each document is also produced. A plurality of category scores is generated by multiplying the category vector by the document vector, and if the category score for a given category exceeds a threshold value, the document in question is classified into this category (see e.g. Ukrainczyk at para. [0012]).

The present invention, on the other hand, concerns finding relationships between various terms. This is quite different from the classification disclosed by Ukrainczyk. As a result, Ukrainczyk does not disclose or suggest receiving the term-to-concept vectors for the document corpus and on basis thereof generating a term-term matrix describing a term-to-term relationship between the terms in the document corpus, and processing the term-term matrix into processed textual information and displaying the processed textual information via a user output interface, as required, for example, by claim 1. In particular, Ukrainczyk discloses three data structures that are used: symbol table 70, feature table 80, and topic spotter matrix 90. As disclosed in para. [0030], feature table 80 is a table of multiple-symbol features useful for topic-spotting. The single-symbol features are found in symbol table 70. Finally, topic spotter matrix 90 is a matrix comprised of feature IDS 510 (rows) and concept nodes (columns). The matrix values are attributes of the relationship between features and concepts, including feature frequency data determined by calculating the number of times the feature occurred in documents tagged to that concept node (count), and assigning a value representative of the strength of association

between the feature and the concept (weight). At the conclusion of the training phase, topic spotter matrix 90 is comprised of a combination of automatically generated data and manually inputted concept evidence vectors from REE Table 50. None of these data structures disclosed by Ukrainczyk is a term-term matrix describing a term-to-term relationship between the terms in the document corpus, as is required, for example, by claim 1. Likewise, since Ukrainczyk does not disclose or suggest the term-term matrix describing a term-to-term relationship between the terms in the document corpus, Ukrainczyk also does not disclose or suggest other features of the claims, such as processing the term-term matrix into processed textual information and displaying the processed textual information via a user output interface, as is required, for example, by claim 1.

Urainczyk is silent about these features because the problem solved by Ukrainczyk exclusively concerns classification of documents. Consequently, there is no need, or incentive, for Ukrainczyk to establish a term-term relationship, which is a comparatively processing intensive task and which would serve no purpose in the system of Ukrainczyk. In addition, the present invention is advantageous because it is capable of performing the necessary calculations in real time. It appears that the Ukrainczyk method requires a training step. Hence, real time implementation appears to be excluded.

Therefore, claims 1, 4, 11-14, and 17-20 are not anticipated by Ukrainczyk.

The Applicant respectfully submits that claim 2 is not unpatentable over Ukrainczyk in view of Tokuda because even if Ukrainczyk and Tokuda were combined as suggested by the Examiner, the resulting combination still would not disclose or

suggest the requirements of the claims. As discussed above, Ukrainczyk does not disclose or suggest receiving the term-to-concept vectors for the document corpus and on basis thereof generating a term-term matrix describing a term-to-term relationship between the terms in the document corpus, and processing the term-term matrix into processed textual information and displaying the processed textual information via a user output interface, as is required by claim 1, from which claim 2 depends.

Tokuda discloses a computer-based information search and retrieval system and method for retrieving textual digital objects uses the projections of the documents onto both the reduced document space characterized by the singular value decomposition-based latent semantic structure and its orthogonal space. However, Tokuda does not disclose or suggest receiving the term-to-concept vectors for the document corpus and on basis thereof generating a term-term matrix describing a term-to-term relationship between the terms in the document corpus, and processing the term-term matrix into processed textual information and displaying the processed textual information via a user output interface.

As a result, even if Ukrainczyk and Tokuda were combined as suggested by the Examiner, the resulting combination still would not disclose or suggest receiving the term-to-concept vectors for the document corpus and on basis thereof generating a term-term matrix describing a term-to-term relationship between the terms in the document corpus, and processing the term-term matrix into processed textual information and displaying the processed textual information via a user output interface.

Therefore, claim 2 is not is not unpatentable over Ukrainczyk in view of Tokuda.

The Applicant respectfully submits that claims 3 and 5-10 are not unpatentable over Ukrainczyk in view of Mohan because even if Ukrainczyk and Mohan were combined as suggested by the Examiner, the resulting combination still would not disclose or suggest the requirements of the claims. As discussed above, Ukrainczyk does not disclose or suggest receiving the term-to-concept vectors for the document corpus and on basis thereof generating a term-term matrix describing a term-to-term relationship between the terms in the document corpus, and processing the term-term matrix into processed textual information and displaying the processed textual information via a user output interface, as is required by claim 1, from which claim 2 depends.

Mohan discloses analyzing and categorizing and exploring or querying unstructured information and tracking trends and exceptions. However, Mohan does not disclose or suggest receiving the term-to-concept vectors for the document corpus and on basis thereof generating a term-term matrix describing a term-to-term relationship between the terms in the document corpus, and processing the term-term matrix into processed textual information and displaying the processed textual information via a user output interface.

As a result, even if Ukrainczyk and Mohan were combined as suggested by the Examiner, the resulting combination still would not disclose or suggest receiving the term-to-concept vectors for the document corpus and on basis thereof generating a term-term matrix describing a term-to-term relationship between the terms in the document corpus, and processing the term-term matrix into processed textual information and displaying the processed textual information via a user output interface.

Therefore, claims 3 and 5-10 are not is not unpatentable over Ukrainczyk in view of Mohan.

Each of the claims now pending in this application is believed to be in condition for allowance. Accordingly, favorable reconsideration of this case and early issuance of the Notice of Allowance are respectfully requested.

Additional Fees:

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with this application to Deposit Account No. 50-4545 (5233-064-US01).

Conclusion

In view of the foregoing, all of the Examiner's rejections to the claims are believed to be overcome. The Applicants respectfully request reconsideration and issuance of a Notice of Allowance for all the claims remaining in the application. Should the Examiner feel further communication would facilitate prosecution, he is urged to call the undersigned at the phone number provided below.

Respectfully Submitted,

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